

Two new species of the genus *Hartertia* Seurat, 1915 (Nematoda: Spiruridae) from Rajasthan, India¹

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(With five text-figures)

During August and October, 1970 two specimens of the Great Indian Bustard were examined for helminths and two species of the genus *Hartertia* Seurat, 1915 collected from the birds are described below.

***Hartertia nigriceps* sp. nov.**

(Figs. 1-3)

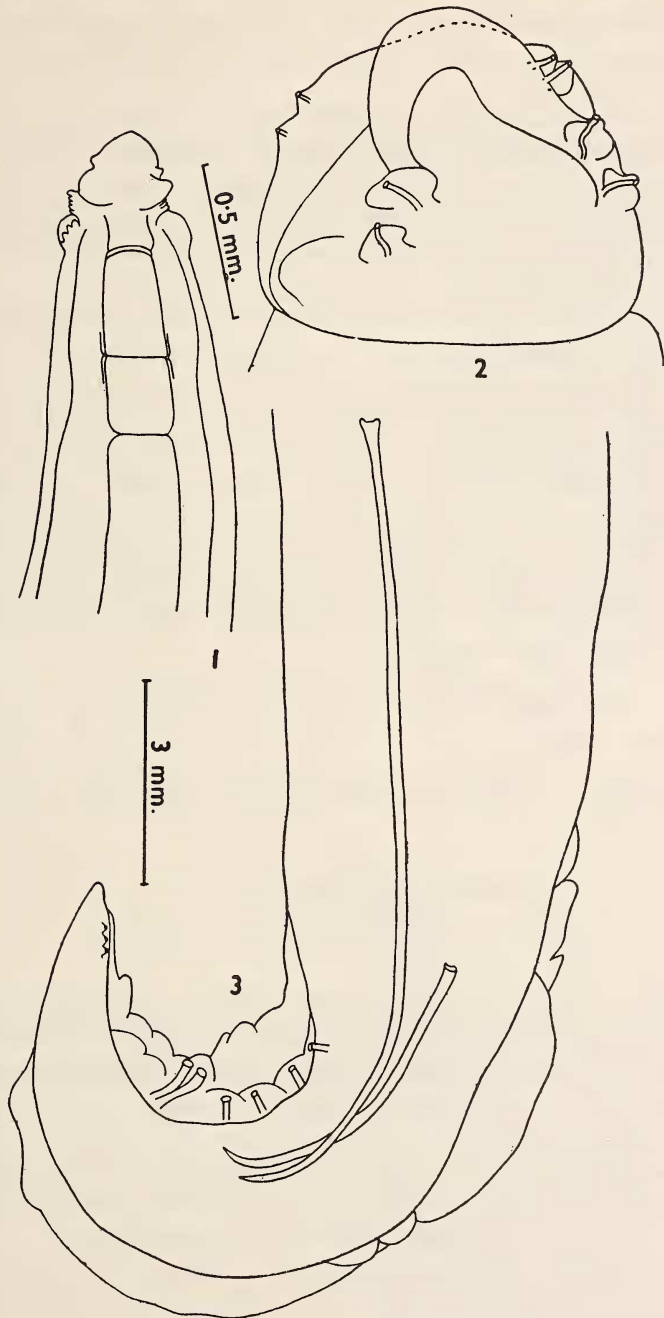
Material: 6 ♂♂ and 9 ♀♀.

Diagnosis: Long, cylindrical body. Cuticle transversely striated. Mouth with two large distinctly trilobed lips, inner surface of which provided with a number of teeth. A short vestibule present. Oesophagus divided into smaller muscular anterior part and larger glandular posterior part. Cervical alae covering almost the whole length of the oesophagus. Caudal alae in males usually irregularly folded, provided with 4 pairs of preanal and 1 pair of postanal pedunculated papillae. In addition the tail tip provided with three pairs of sessile papillae. Spicules unequal. In females the tail is conical and vulva is situated in anterior third of the body.

MALE: 33-41² in length and .792-.954 in diameter. Lips .108-.117 × .126-.135, provided with one papilla subterminally. Cervical alae 3.420-4.140 × .117-.162. Oesophagus having two parts, the anterior, shorter and muscular part measuring .432-.450 and the posterior, larger and glandular part measuring 4.320-4.356. Nerve ring .468-.504 from the anterior end. Spicules greatly unequal, smaller .756-.810 × .027-.036 and larger 1.566-3.780 × .024-.030. Tail .504-.540. Caudal alae .810-.900 ×

¹ Accepted March 1975.

² All measurements in millimetres.



Figs. 1-3. *Hartertia nigriceps* sp. nov.

Male 1. Anterior part; 2. Anterior extremity magnified; 3. Posterior part.

.144-.216, provided with four pairs of preanal and one pair of postanal pedunculated papillae measuring .108-.126 in height. In addition to tail tip provided with three pairs of sessile papillae. Caudal alae sometimes reaching the tail tip.

FEMALE: 54-60 in length and 1.080-1.206 in diameter. Lips .108-.129 long. Vestibule .072-.090. Anterior part of oesophagus .450-.504 and posterior part 4.932-4.950. Nerve ring .486-.540 from anterior end. Cervical alae 5.040-5.310 \times .216. Tail straight, conical with pointed tip and measuring .288-.414. Vulva in anterior third of body length. Ova .036-.045 \times .018-.021.

In the presence of cervical alae *Hartertia nigriceps* closely resembles *H. natalensis* Mönning, 1931 and *H. rotundata* (Linstow 1883) Seurat, 1915. *H. nigriceps* can be differentiated from *H. natalensis* by smaller size of male, cervical alae, oesophagus, spicules, number of postanal caudal papillae and possession of three pairs of sessile caudal papillae, whereas *H. natalensis* has five pairs of sessile papillae. *H. nigriceps* differs from *H. rotundata* in possessing comparatively larger cervical alae, vulva in the anterior third of body, smaller eggs and three pairs of sessile caudal papillae. In *H. rotunda* cervical alae are about 1/5th of the body length, vulva posterior to anterior third of body and five pairs of sessile caudal papillae.

Host: Great Indian Bustard, *Choriotis nigriceps*.

Location: Intestine.

Type-locality: Pokaran (Jaisalmer district), Rajasthan.

***Hartertia rajasthanensis* sp. nov.**

(Figs. 4 & 5)

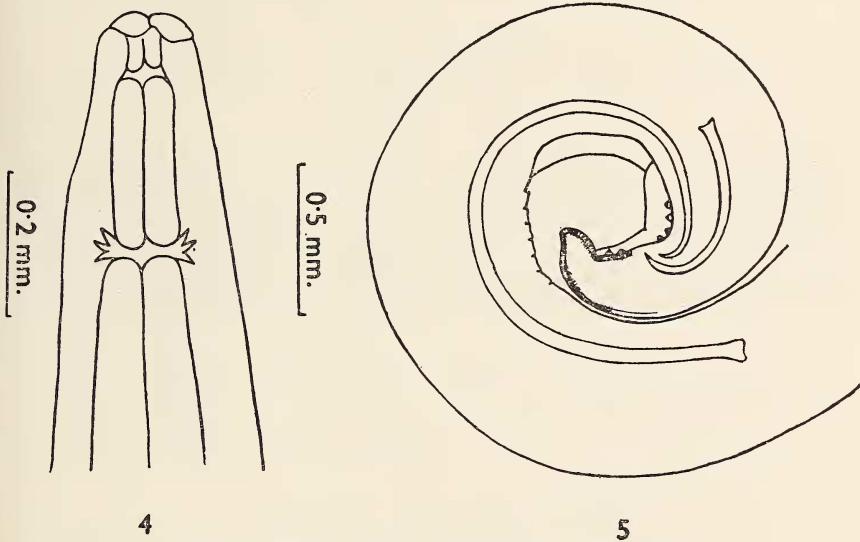
Material: 24 ♂♂ and 42 ♀♀.

Diagnosis: Long, cylindrical body. Cuticle transversely striated. Mouth with two lateral trilobed lips, each lobe further subdivided into two parts. Two lateral cephalic papillae situated near the base of the lip. A linear row of fine cervical papillae. Vestibule very short, 0.043-0.072. Oesophagus consisting of two parts, an anterior shorter and muscular part and the posterior longer and glandular part. Nerve ring situated close to the junction of glandular and muscular parts of the oesophagus, .343 from the anterior extremity. No cephalic alae.

MALE: 23-26 in length and .540-.720 in diameter. Ratio of tail to body length 1:72. Lips measuring .031 \times .055. Anterior muscular part of oesophagus .261-.410 long. Posterior glandular part 4.090-4.450. Tail strongly coiled ventrally. Cervical papillae reaching posteriorly .099-.126 from anterior extremity of the worm. Caudal alae supported by 4

pairs of preanal and 2 pairs of postanal pedunculated papillae. The first pair of preanal papillae .144-.180 from anus. The last postanal papillae .144-.162 behind anus. A pair of greatly unequal spicules, the larger $2.790 \times .027$ and the smaller $.614-.666 \times .033$. Extruded spicules .295-.306. Cloacal aperture .306-.360 from posterior extremity. Tail bluntly rounded and provided with a pair of caudal alae $1.206 \times .196$.

FEMALE: 30.5-31.5 in length and .720-.738 in diameter. Ratio of tail to total length of body 1:150. Vulva near middle of body length. Didelphous opposed uterus, its anterior arm reaching a little in front of posterior end of oesophagus. Thick shelled embryonated ova $.041-.051 \times .029-.031$.



Figs. 4-5. *Hartertia rajasthanensis* sp. nov.

Male. 4. Anterior end; 5. Posterior end.

In the great dissimilarity in the size of spicules *Hartertia rajasthanensis* closely resembles *H. obesa* Seurat, 1915, from which it can be distinguished by the possession of vulva at the middle of body length as against anterior third in *H. obesa*, smaller size of ova, smaller size of females and smaller tail 1:72 in male and 1:150 in female as against 1:31 and 1:27 respectively in *H. obesa*. In all the species ratio of tail to body length is larger in females but in *H. rajasthanensis* tail in females is shorter compared to body length.

This is the first report of the occurrence of the genus *Hartertia* from India.

Host: Great Indian Bustard, *Choriotis nigriceps* (Vigors).

Location: Intestine.

Type-locality: Pokaran (Jaisalmer District), Rajasthan.

Type specimens to be duly deposited in the National Zoological Collections in the Zoological Survey of India, Calcutta.

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